

# ABSTRACT OF THE DISCLOSURE

When power calculation ( $\alpha^i$ ) of  $\alpha$  as the element of a primitive polynomial on a Galois field is executed to make arithmetic operation of symbols at a time data is encoded in and decoded from a recording medium, a shift operation section of  $i$  bits and a reference table of the numbers of  $2^i$  are provided to calculate  $\alpha^i$ .